

Notice of Allowability

Application No.

09/705,996

Examiner

Sean P. Shechtman

Applicant(s)

ZHAO ET AL.

Art Unit

2125

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address--

All claims being allowable, PROSECUTION ON THE MERITS IS (OR REMAINS) CLOSED in this application. If not included herewith (or previously mailed), a Notice of Allowance (PTOL-85) or other appropriate communication will be mailed in due course. **THIS NOTICE OF ALLOWABILITY IS NOT A GRANT OF PATENT RIGHTS.** This application is subject to withdrawal from issue at the initiative of the Office or upon petition by the applicant. See 37 CFR 1.313 and MPEP 1308.

1. ☒ This communication is responsive to 08 June 2004.
2. ☒ The allowed claim(s) is/are 1-25.
3. ☒ The drawings filed on 03 November 2000 are accepted by the Examiner.
4. ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some* c) ☐ None of the:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this national stage application from the International Bureau (PCT Rule 17.2(a)).

* Certified copies not received: _____.

Applicant has THREE MONTHS FROM THE "MAILING DATE" of this communication to file a reply complying with the requirements noted below. Failure to timely comply will result in ABANDONMENT of this application.

THIS THREE-MONTH PERIOD IS NOT EXTENDABLE.

5. ☐ A SUBSTITUTE OATH OR DECLARATION must be submitted. Note the attached EXAMINER'S AMENDMENT or NOTICE OF INFORMAL PATENT APPLICATION (PTO-152) which gives reason(s) why the oath or declaration is deficient.
6. ☐ CORRECTED DRAWINGS (as "replacement sheets") must be submitted.
- (a) ☐ including changes required by the Notice of Draftsperson's Patent Drawing Review (PTO-948) attached
- 1) ☐ hereto or 2) ☐ to Paper No./Mail Date _____.
- (b) ☐ including changes required by the attached Examiner's Amendment / Comment or in the Office action of Paper No./Mail Date _____.
- Identifying indicia such as the application number (see 37 CFR 1.84(c)) should be written on the drawings in the front (not the back) of each sheet. Replacement sheet(s) should be labeled as such in the header according to 37 CFR 1.121(d).
7. ☐ DEPOSIT OF and/or INFORMATION about the deposit of BIOLOGICAL MATERIAL must be submitted. Note the attached Examiner's comment regarding REQUIREMENT FOR THE DEPOSIT OF BIOLOGICAL MATERIAL.

Attachment(s)

- | | |
|---|--|
| 1. <input type="checkbox"/> Notice of References Cited (PTO-892) | 5. <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 2. <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 6. <input type="checkbox"/> Interview Summary (PTO-413),
Paper No./Mail Date _____. |
| 3. <input type="checkbox"/> Information Disclosure Statements (PTO-1449 or PTO/SB/08),
Paper No./Mail Date _____ | 7. <input type="checkbox"/> Examiner's Amendment/Comment |
| 4. <input type="checkbox"/> Examiner's Comment Regarding Requirement for Deposit
of Biological Material | 8. <input checked="" type="checkbox"/> Examiner's Statement of Reasons for Allowance |
| | 9. <input type="checkbox"/> Other _____ |

DETAILED ACTION

1. Claims 1-25 are presented for examination. Claims 1-2, 14-16, 20, and 23-25 have been amended.

Claim Rejections - 35 USC § 112

2. Rejections withdrawn due to the amendment.

Claim Rejections - 35 USC § 103

3. Rejections withdrawn due to the amendment.

Allowable Subject Matter

4. Claims 1-25 are allowed.

The following is an examiner's statement of reasons for allowance:

While, AAPA teaches a method for operating a convective acceleration sensor, the acceleration sensor including a heater element and a plurality of temperature sensing elements, the method comprising the steps of: generating a differential output voltage indicative of a magnitude of acceleration applied along at least one axis passing through the heater element and the plurality of temperature sensing elements.

And, Miller teaches a method/instrumentation amplifier that generally relates to transducer amplifiers comprising: a bridge circuit (i.e., transducer) that produces a differential voltage signal and generates a common-mode output voltage corresponding to the differential output voltage, generating a control output proportional to the common mode output voltage, and regulating the common-mode output voltage using the control output.

And while, Hosoi and Leung, teaches a method for operating a convective acceleration sensor, the acceleration sensor including a heater element and a plurality of temperature sensing

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elements, the method comprising the steps of: generating a differential output voltage indicative of a magnitude of acceleration applied along at least one axis passing through the heater element and the plurality of temperature sensing elements. Wherein Leung goes on to further teach amplification circuitry configured to receive the differential output voltage generated by the plurality of temperature sensing elements

And, Lemkin teaches an integrated accelerometer chip with mechanical sensors that can be "integrated with CMOS for monolithic sensor based systems" and control thereof, wherein reference is made to a broad range of compatible sensor-based systems defined as those systems that can be "integrated with CMOS for monolithic sensor based systems", wherein Lemkin teaches a differential sensor interface, wherein ΔV_{cm} is the difference in the input common mode voltage in response to the voltage step, and the Lemkins teachings are specifically directed towards solving the problems associated with the input common-mode voltage shift causing offsets errors and placing severe requirements on the op-amp.

None of the combinations of AAPA with Miller, Hosoi with Lemkin, or Leung with Lemkin, taken either alone or in combination disclose an integrated convective accelerometer chip and method of operating a convective acceleration sensor having all the claimed features of applicant's instant invention, specifically including: "regulating the common-mode voltage across the temperature sensing elements using the control output" or regulating the common-mode output voltage using the control output, wherein the regulating includes regulating a current through the heater element. Also, there is no motivation to combine these references to meet these limitations.

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Any comments considered necessary by applicant must be submitted no later than the payment of the issue fee and, to avoid processing delays, should preferably accompany the issue fee. Such submissions should be clearly labeled "Comments on Statement of Reasons for Allowance."

Conclusion

5. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Sean P. Shechtman whose telephone number is (703) 305-7798. The examiner can normally be reached on Monday-Friday from 9:30am to 6:00pm.

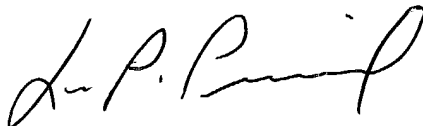
If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Leo P. Picard, can be reached on (703) 308-0538. The fax phone number for the organization where this application or proceeding is assigned is (703) 872-9306.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 305-9600.

SPS

Sean P. Shechtman

June 30, 2004



LEO PICARD
SUPERVISORY PATENT EXAMINER
TECHNOLOGY CENTER 2100

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